Operator description of translation algorithms

$S/044/63/000/002/048/050$
A060/A126

erators occurs in the following fashion. First the translation algorithm is written in the form of special simple rules, then this record of the algorithm is transformed into a sequence of operators. The obtained record is coded, fed into the computer and compiled into a translation program by a special compiler. The article contains a description of simple rules and operators. For example: Rule 4 "Table look-up". In the rule one indicates the number of the word, whose suffix is being looked for, and the number of the table in which one should look: "find suffix S_γ in table NM". Rule 10 "Insertion of a word". With this command it is possible to insert a word, and it is required to specify the location of the insertion and what word should be inserted: "insert before V_2 an adv with translation 'just'", etc.

T.N. Moloshnaya

[Abstracter's note: Complete translation]

Card 2/2

KULAGINA, O.S. (Moskva); VAKULOVSKAYA, G.V. (Moskva)

Experimental translations from French into Russian on the "Strela" machine. Probl. kib. no.2:283-288 '59   (MIRA 13:3)
(Machine translating)

The programming algorithms for the machine translation of mathematical texts from French into Russian were developed by O.S. Kulagina and I.A. Mel'chuk. These algorithms assume the existence of a special vocabulary which contains not words but stems. The authors give examples of translations obtained and methods used in eliminating errors. No references are given.

27.1230

39919
S/044/62/000/007/100/100
C111/C333

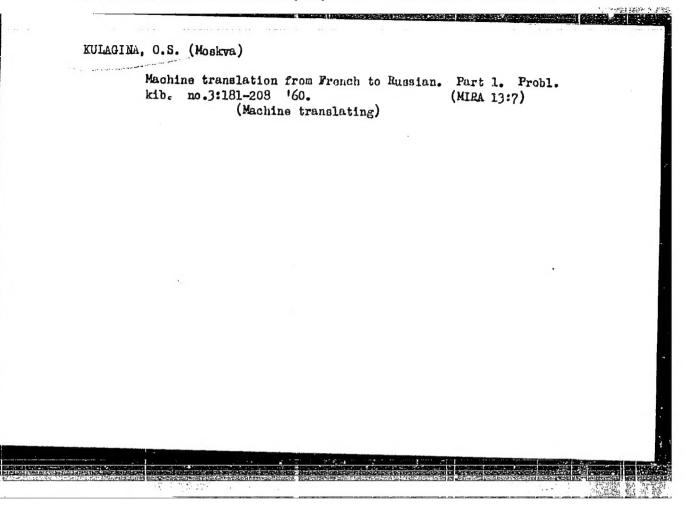AUTHOR: Kulagina, O. S.

TITLE: On the operator-description of translation algorithms
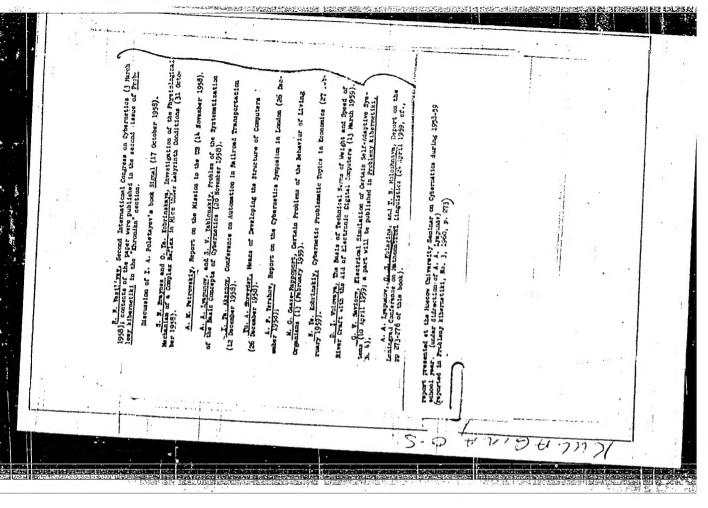and the automatization of their programming

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 85,
abstract 7V422. ("Probl. kibernetiki", no. 2, M., Fizmatgiz,
1959, 289-302)

TEXT: Considered is the description of the translation algorithms
using standard rules, whereby one attempts to simplify the programming
of there algorithms. The following work schedule is suggested: 1) the
translation rules are put into words or standard form; 2) the algorithm
written in this manner becomes an operator sequence (on the basis of the
French-Russian translating program, 17 such operators are suggested);
3) the operators of the sequence are numbered and all parameter values
in the operators are coded. The algorithm written in this manner makes
possible the use of a compiling program in which the translation is
automatically set-up with the help of the computer. The structure
of the compiling program is given in general terms. Data on the
realization of the suggested method are not given.
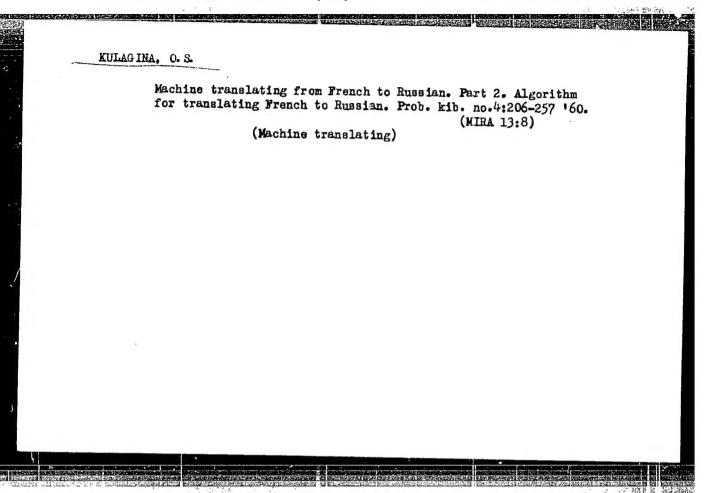[Abstracter's note: Complete translation.]
Card 1/1

KULAGINA, O.S. (Moskva)

Machine translation from French to Russian. Part 1. Probl.
kib. no.3:181-208 '60.   (MIRA 13:7)
            (Machine translating)

I. N. Bril'lyev, Second International Congress on Cybernetics (1 March 1958); contents of the paper were published in the second issue of Problemy kibernetiki in the "Chronika" section.

Discussion of I. A. Poletayev's book Signal (17 October 1958).

I. N. Bhyrea and O. Fa. Kobriantaya, Investigation of the Physiological Mechanism of a Complex Reflex in Mice Under Labyrinth Conditions (31 October 1958).

A. M. Petrovskiy, Report on the Mission to the US (14 November 1958).

A. A. Lyapunov, and S. V. Yablonskiy, Problem of the Systematization of the Basic Concepts of Cybernetics (28 November 1958).

I. Ya. Akusher, Conference on Automation in Railroad Transportation (12 December 1958).

Yu. A. Shreyder, Means of Developing the Structure of Computers (26 December 1958).

A. P. Yershov, Report on the Cybernetics Symposium in London (26 December 1958).

M. G. Gaase-Rapoport, Certain Problems of the Behavior of Living Organisms (13 February 1959).

N. Ye. Kobrinskiy, Cybernetic Problematic Topics in Economics (27 February 1959).

D. I. Yudovych, The Basis of Technical Sums of Weight and Speed of River Craft with the Aid of Electronic Digital Computers (13 March 1959).

G. V. Savinov, Electrical Simulation of Certain Self-adaptive Systems (10 April 1959); a part will be published in Problemy kibernetiki, No. 4).

A. A. Lyapunov, G. P. Pilskiny, and T. N. Moloshnava, Report on the Leningrad Conference on Mathematical Linguistics (24 April 1959; cf., pp 271-278 of this book).

report presented at the Moscow University Seminar on Cybernetics during 1958-59 school year. (under direction of A. A. Lyapunov) (reported in Problemy kibernetiki, No. 3, 1960, p. 271)

KULAGINA, O. S.

Machine translating from French to Russian. Part 2. Algorithm
for translating French to Russian. Prob. kib. no.4:206-257 '60.
(MIRA 13:8)
(Machine translating)

KULAGINA, O. S.

"On the Use of Machines in Composing Algorithms for Text Analysis."

Report submitted for the Symposiun on Principles in the Design of
Self-Learning Systems, Kiev Ukr SSR, 5-9 May 1961

S/044/62/000/004/098/099
C111/C222

AUTHORS: Kulagina, O.S., Kaluzhnin, L.A., Ivanov, V.V.

TITLE: On the cultural significance of mechanical translation

PERIODICAL: Referativnyy zhurnal, Matematika, no. 4, 1962, 59-60,
             abstract 4V402.("Vestn. istorii mirovoy kul'tury", 1961,
             No. 3, 22-38)

TEXT: A short survey of the stages of scientific and cultural
development of mankind is given from the standpoint of the means of
communication and information storage. Emphasized is the significance of
fast working computers in breaking down the language barriers which are
considerable obstacles to scientific and technical development. The
structure of an electronic computer and its application to mechanical
translations from French into Russian are described. The influence of
mechanical translation on linguistics is mentioned. It is pointed out
that the problem of meaning is the basic problem, because the meaning
does not change in translating from one language into the other.

[Abstracter's note: Complete translation.]

Card 1/1

33562
S/194/61/000/012/020/097
D201/D303

9,7000

AUTHORS: Vakulovskaya, G. V. and Kulagina, O. S.

TITLE: Automatic translation from French into Russian. Part
           II. Description of the program

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
           no. 12, 1961, 7, abstract 12B38 (v sb. Probl. kiberne-
           tiki no. 5, M., Fizmatgiz, 1961, 245-262)

TEXT: The sequence of program operations in translations from
French into Russian is described. The translation algorithm was re-
ealized on the "Strela" computer using 17 programs containing about
8500 commands; about 200 cells are taken by tables and constants.
The first program (P), the P of searching for the word in a voca-
bulary, introduces into the computer the consecutive sentence on a
punched card. It is assumed that each sentence begins with a new
punched card and occupies a whole number of them. Each work begins
on a new line on the card. The second P processes the revolutions.
French words in the data are analyzed and the first word is chosen

Card 1/2

Automatic translation from ...

33062
S/194/61/000/012/020/097
D201/D303

with the indication as to the revolution. It is checked whether the revolution is complete. The third P shifts and re-codes the word information. The fourth P is the program of morphological processing of verbs, nouns and adjectives - it works with tables of endings and obtains the initial data of the above parts of the speech. The fifth, sixth and eigth P are the programs of various homonyms; these programs process the adjectives, formulae and verbs related to different homonyms. The P's from the eighth to the twelfth are those of analysis and produce the form and the location word data, scale these data and send them to the French word data in place of the word data which ceased to be required. The 13th P chooses Russian words and their data from the Russian part of the vocabulary according to the number of translation contained in the French data. The 14th P finally processes the adjectives, prepositions and verbs of the past tense. The 15th P chooses words for verbs, nouns and adjectives. The 16th P includes in the data a mark that a prefix is required. The additions of prefixes are done by the 17th P in the final processing of verbs. 2 references. /Abstractor's note: Cpmplete translation./

Card 2/2

KULAGINA, O. S., KALUZHNIN, L. A., and TSEYTIN, G. S.

"Mathematic Problematics of Linguistics and Machine Translation"

presented at the All-Union Conference on Computational Mathematics and Computational Techniques, Moscow, 16-28 November 1961

So: Problemy kibernetiki, Issue 5, 1961, pp 289-294

43341

S/044/62/000/011/064/064
A060/A000

AUTHORS: Bagrinovskaya, G. P., Kulagina, O. S., Lyapunov, A. A., Moloshnaya,
             T. N.

TITLE: Some problems in mathematical linguistics arising in connection
             with machine translation

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 88, abstract 11V501
             (In collecti   "ash. perev. i prikl. lingvistika". no. 6, Mos-
             cow, 1961,   8)

TEXT: In this report, given at the Conference on mathematical linguistics
in Leningrad in 1959, the possibilities are considered of a further development
of the ideas of A. A. Lyapunov and O. S. Kulagina, formulated in O. S. Kulagina's
paper "On a method of defining grammatical notions on the basis of the theory of
sets" ("Problemy kibernetiki", Moscow, 1958, no. 1). It is proposed to distin-
guish three forms of information characterizing a sentence: a) indication of
the context to which every word belongs (lexical information); b) indication of
the families to which every word belongs (morphological information); c) indi-
cation of the configuration (syntactic information). The syntactic information

Card 1/2

Some problems in mathematical...

S/044/62/000/011/064/064
A060/A000

consists in indicating the number of the vertex in the sentence tree, where every tree is considered as a subset of the universal Cantor tree. The latter assumption is verified by the two-term character of the majority of configurations in natural languages. A method is also indicated for describing the syntactic information by constructing the universal graph of families of the language, where pairs entering in the same configuration are considered as connected. It is claimed that it is necessary to couple the set-theoretic modelling of a language with the information-theoretic approach and then one will learn to estimate precisely the degree of approximation of the abstract model to the real language, and in this connection to establish statistically the fundamental (in contrast to the "non-fundamental") characteristics of the language. It is indicated that the solution of all these problems connected with machine translation may promote the development of the still inexistent theory of algorithms with ratings. In conclusion certain general considerations are presented as to the method of constructing translation algorithms, the employment of mathematicians and linguists, and the preparation of cadres in that domain.

I. I. Revzin

[Abstracter's note: Complete translation]
Card 2/2

9.7000

AUTHOR: Kulagina, O. S. (Moscow)

TITLE: On the use of a machine for compiling algorisms of text analysis

SOURCE: Problemy kibernetiki, no. 1, 1962, 209–223

TEXT: The compilation of rules by which the machine has to translate is the greatest difficulty in mechanical translation. It is therefore very tempting to use the machine not only in the technical work of translation and its programming but in the compiling of the rules for translation as well.

It seems most desirable to compile algorisms which, in the limits of a group of languages, will make the translation from one language to any other possible. This is achieved by compiling two algorisms for every language in the given group: one of independent analysis and another of independent synthesis. The first supplies the initial data for the latter.

The algorism of analysis comprises three parts: search for words in the dictionary, morphological analysis and syntactic analysis. The latter concerns the finding of relations between couples of words and includes the rules governing the structure of separate configurations and the order of work. The problem is to construct an aggregate of such rules that will be independent of the given text so that when analysing the text by this algorism one gets the relations originally given with the text.

The concepts used for stating the problem and solving it are defined. The problem is stated and the man-machine relation is described: man feeds into the machine the full code of the text, the form of the analysis

Card 1/2

On the use of a machine for...

S/582/62/000/007/008/008
I011/1211

algorism and the super-algorism (that by which the analysis algorism is constructed). The machine now constructs the analysis algorism and tests it.

Since it is difficult yet to define the forms of analysis algorisms that will solve the stated general problem some particular problems are to be solved. Two forms of algorism are defined Four different versions of the first form are examined.

A Russian, an English, a German and two French texts, all of them in mathematics and physics, were chosen for experiments. Analysis algorisms of the first form in all their four versions were constructed and tested for all the texts. The results are given in a table.

Since the chosen texts are quite short and the method of experiment is yet far from perfect, the results given here are to be regarded for the time being as preliminary and tentative only The fact that the number of wrongly analysed words never exceeded the tenth part of the overall number of words in the texts shows that the algorism of the first type may be regarded as a sufficient first approximation to the analysis algorism one is looking for.
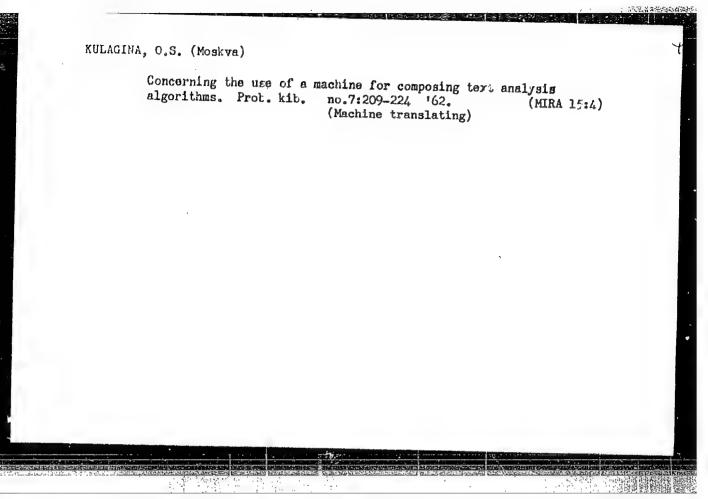
There is one table. The English-language reference reads as follows: Ingve V H., A programming language for mechanical translation, Mechanical Translation, vol 5, No. 1, 1958.

SUBMITTED: December 30, 1960

Card 2/2

KULAGINA, O.S. (Moskva)

    Concerning the use of a machine for composing text analysis
    algorithms. Prot. kib.   no.7:209-224 '62.   (MIRA 15:4)
                            (Machine translating)

S/582/62/000/008/010/013
D405/D301

AUTHORS: Vakulovskaya, G. V. and Kulagina, O. S. (Moscow)

TITLE: On machine translation from French into Russian. IV. Experimental results and analysis of errors

SOURCE: Problemy kibernetiki. no. 8. Moscow, 1962, 253-291

TEXT: Work done in machine translation from French into Russian is summed up. The main results are listed and the translation errors are analyzed. The texts selected for translation were from works on mathematical analysis by Picard, Cartan and Bourbaki. Prior to introducing the texts into the machine, they were altered in two respects: Complex sentences of more than 43 words were broken up into parts (as the routine provided only for the processing of sentences not longer than 43 words); some words were replaced by others so as to match the text with the dictionary available. The translation errors committed by the machine were divided into 4 groups: A) Errors due to the incompleteness of the algorithm used, i.e. errors which could be eliminated by supplementing and

Card 1/3

On machine translation ..

S/582/62/000/008/010/013 ·
D405/D301

refining the available algorithm. B) Errors which could not be eliminated by modifying the algorithm (e.g. syntactic structures of double meaning). C) Errors resulting from preceding errors. D) The translation does not render the meaning exactly, although the Russian sentence is grammatically correct. The machine translation consists of the following stages: Search for words in the dictionary; this amounts to finding for each word the longest stem, entirely contained in this word. Since the available dictionary was limited (about 1200 words), it often happened that so-called "non-provided for" words were met, i.e. words for which a stem was lacking. In the second stage, the machine processes complex sentences, i.e. it searches for the word groups which are not literally translated. The third stage consists in the resolution of homonyms. Then follows the analysis of the parts of speech and, finally, the synthesis (the construction of the Russian sentence). The errors committed at each of these stages are analyzed. The authors arrive at the following general conclusions about machine-translation algorithms: Such algorithms should be constructed in a certain gradation, with each algorithm containing a very general

Card 2/3

On machine translation ...

S/582/62/000/008/010/013
D405/D301

part (which does not even depend on the language for which it is constructed), a part which depends on the language, but not on the special field of the translation, and a part which depends both on the language and on the field. The relationship between these parts has to be decided upon from considerations of design, possibilities and storage capacity (of the various memories) of the machine. The dictionary should be matched to these principles.

Card 3/3

LEBEDKINA, Ye.D.; FEDOROV, V.M.; FAYNBERG, V.Ya., kand.fiz.-matem.nauk;
BARCHUKOV, A.I., kand.tekhn.nauk; FESENKOV, V.G., akademik;
FUCHEROV, V.F., doktor khim.nauk; DZERDZEYEVSKIY, B.L., prof.;
SHAPIRO, G.S., doktor tekhn.nauk; KUIAGINA, O.S.; UDAL'TSOVA, Z.V.,
doktor istor.nauk; LIKHACHEV, D.S.

    Brief notes. Vest. AN SSSR 32 no.1:119-130 Ja '62. (MIRA 15:1)
        (Scientific societies) (Research)

3/2582/63/000/010/0205/0213

ACCESSION NR: AT4016492

AUTHOR: Kulagina, O. S. (Moscow)

TITLE: The use of machines in machine translation studies

SOURCE: Problemy* kibernetiki, no. 10, 1963, 205-213

TOPIC TAGS: computer programming, machine translation, linguistic analysis, language model, syntax analysis

ABSTRACT: The present article contains a brief survey of theoretical machine translation problems and the present trends in the work being conducted in this area by the machine translation (MT) groups of the Matematicheskiy institut AN SSSR (Institute of Mathematics) and the Institut yazy*koznaniya AN SSSR (Instituto of Linguistics). The theoretical problems encountered in MT are arbitrarily subdivided by the author into two major categories: descriptive and structural. The first group contains problems relating to the description or analysis of the languages to be translated and the description of the algorithms for translation. The question of analytic and synthetic language models is considered, along with the development of a standard form for the algorithm of morphological analysis. Work conducted by the Institute of Mathematics in the use of machines for the compilation of algorithms for textual syntactic analysis is described. The use of so-

Card 1/3

ACCESSION NR: AT4016492

called "configuration tables" in this respect is discussed. The problem of the
construction, by means of a machine, of an algorithm for the syntactical analysis
of a text is formulated by the author in the following terms: There is a text,
the words of which are characterized by definite aggregates of attributes. Indi-
cated in this text are all the relations between the words and the types of these
relations. An analysis algorithm is to be constructed so that, when analyzing the
text in question by means of this algorithm, the same inter-word relations are ob-
tained that were originally given – the machine must learn, as it were, to analyze
a text according to a given sample. Two fundamentally different approaches to
textual analysis are distinguished: the "local" and the "integral". In the first
of these the machine receives, after analysis of a phrase by means of an "analyzer",
a certain variant of the arrangment or disposition of the relations in the text,
and then compares the relations obtained by itself (that is, by the machine) with
those which were established by the human operator, noting in which words the ma-
chine was in error (that is, in which words it incorrectly received the number of
the control word or the relation type) and elaborating rules for the correction
of the errors. The second possible approach to sentence analysis – the "integral"
method – consists of receiving all permissible variants of the textual analysis
with subsequent sampling.   A permissible variant of analysis is the complete and
correct aggregate of relations such that each bound pair of words is the realiza-
tion of a certain configuration of the analyzer. An experiment, conducted
Card   2/3

ACCESSION NR: AT4016492

at the Institute of Mathematics of the SSSR Academy of Sciences using this method
of receiving all permissible variants with the phrase represented in matrix form
by means of zeros and ones, is described. The phrase employed in the experiment
was in the French language, viz.: "Ce groupe est alors un sous-groupe ferme du
groupe lineaire d'un certain espace vectoriel." Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 22Aug62   ENCL: 00

SUB CODE: DP   NO REF SOV: 019   OTHER: 009

Card   3/3

L 21005-55   bXT/EED-2/EWT(d)/EWP(1)/ Pq-4/Pk-4/Pq-4/Po-4   IJP(c)/ASD(a)-5/RAEM(c)/
ESP(dp)   BB/GG

ACCESSION NR: AT5000722   S/2582/64/000/012/0233/0237

AUTHORS: Vakulovskaya, G. V. (Moscow); Kulagina. O. S. (Moscow)

TITLE: On one means of text analysis   B+fl

SOURCE: Problemy* kibernetiki, no. 12, 1964, 233-237

TOPIC TAGS: translation programming, clear text data, natural language processing

ABSTRACT: The authors present the results of application of a method of automatic
text recognition. Their method is based upon earlier works by O. S. Kulagina (Ob
ispol'zovanii mashiny* pri sostavlenii algoritmov analiza teksta, Sb. Problemy*
kibernetiki, vy*p. 7, Fizmatgiz, M, 1962 and Ispol'zovanii mashin v issledovaniyakh
po mashinnomu perevodu, Sb. Problemy* kibernetiki, vy*p. 10, Fizmatgiz, M, 1963)
and by G. S. Slutsker (Polucheniye vsekh dopustimy*kh variantov sintaksicheskogo
analiza teksta pri pomoshchi mashiny*, Sb. Problemy* kibernetiki, vy*p. 10,
Fizmatgiz, M, 1963). Elements of a square matrix are either zero or unity according
to the algorithm, which uses q control word - controlled word mechanism to link
logically elements (words of text) which are syntactically and grammatically linked.
The authors define the mechanisms of verb clearing, preposition clearing, clearing
by diagonal elements in the matrix, and by matrix rows. The significance of each is

Card 1/2

L 21005-65
ACCESSION NR: AT5000722

explained in terms of the control word and subordinate word concept. A discussion
of variants of representation is given, and an example is shown. Eighty sentences
of technical text were used in testing the method; the sentences ranged in length
from 5 to 37 words. The number of variants, both acceptable and rejected, was
found and recorded in a table. The authors note that a correct variant was not
found in all cases. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 11Jan64   ENCL: 00

SUB CODE: DP   HR REF SOV: 003   OTHER: 000

Card 2/2

VAKULOVSKAYA, G.V. (Moskva); KULAGINA, O.S. (Moskva)

A method of analysis of texts. Probl. kib. no.12:233-237 '64.
(MIRA 18:6)

ACC NR: AT6033084   SOURCE CODE: UR/2582/66/000/016/0147/0169

AUTHOR: Kulagina, O. S. (Moscow); Lyapunov, A. A. (Novosibirsk)

ORG: none

TITLE: On the problem of modeling an evolutionary process

SOURCE: Problemy kibernetiki, no. 16. Moscow, 1966, 147-169

TOPIC TAGS: mathematic model, genetics, biologic reproduction, binary code

ABSTRACT: A mathematical model of the evolution of a population of individuals, each with a different genotype, is described. The genotype is considered to be a set of genes each of which has two alleles, 1 and 0, i.e. the genotype is coded as a cortege of n digits with the values 0 and 1. A discrete space of genotypes is considered. The individuals in the population are numbered. Reproduction consists in the selection of pairs of individuals from the numbered set, following a specific numerical sequence, production of offspring, deletion of parents and the insertion of offspring in the vacancies thus formed or, if no vacancies are left, addition of offspring to the tag-end of the population. The complete cycle of the succession of generations is divided into the following stages: formation of parent pairs, formation

Card 1/2

ACC NR: AT6033084

of gametes, formation of zygotes, elimination of lethal genes, development of adults. This model can be used to investigate the effect of various mechanisms of selection in the course of evolution as a function of the degree of panmixia of the original population. Orig. art. has: 4 tables, 8 figures.

SUB CODE: 06, 12 / SUBM DATE: 30Jan65/ ORIG REF: 013

Card 2/2

S/883/62/000/000/016/020
E194/E155

AUTHORS: Vinogradova, I.E., Alekseyeva, Ye.A., and Kulagina, S.S.

TITLE: Temperature methods of assessing the properties of
             E.P. oil

SOURCE: Metody ispytaniya na iznashivaniye; trudy soveshchaniya,
             sostoyavshegosya 7-10 dek. 1960. Ed. by
             M.M. Khrushchov. Moscow, Izd-vo AN SSSR, 1962. 164-175

TEXT: Point-contact friction machine tests are simple and
sensitive to the effects of E.P. additives, although information
is generally not available about the actual temperatures on the
friction surfaces, except in four-ball machine type KT -2 (KT-2),
where the rubbing speeds are low and the oil is assessed by the
critical temperature at which the oil film breaks down. In
conventional four-ball machines the effects are more complicated
and it is recommended to assess the contact surface temperature by
study of structural changes in the surface layers of the metal.
A study was made of the microhardness distribution near the wear
scar of sectioned balls from the four-ball machine. The temperature
distribution was estimated by interpolation of microhardness
Card 1/2

Temperature methods of assessing...   S/883/62/000/000/016/020
                                           E194/E155

results on the tempering curve of the steel in question. The
differing effects of chlorine- and sulphur-containing additives on
the load/temperature characteristics at seizure were determined in
this way. Most sulphur additives reduce the temperature of the
friction surfaces, whilst chlorine additives prevent welding.
Thermographic analysis is a most sensitive procedure for studying
physical and chemical processes but has been little used in
studying E.P. oil. It was accordingly used to judge of changes in
the aggregate state from inflection points on the heating or
cooling curves, which correspond to endothermic or exothermic
reactions. The results were compared with those obtained in four-
ball machines. Test results are quoted for a number of sulphur-
and chlorine-containing additives in oils, both with and without
iron powder. It is, of course, necessary to separate the reactions
between additives and iron from those corresponding to evaporation
or thermal decomposition of the additive. It is desirable to check
the reaction between additives and iron up to temperatures above
the highest bulk oil temperature and below the seizure temperature,
i.e. in the range 150 to 250 °C.
Card 2/2   There are 8 figures and 2 tables.

S/032/62/028/008/009/014
B104/B102

AUTHORS: Vinogradova, I. E., and Kulagina, S. S.

TITLE: Investigation of structural changes in surface layers and
             estimation of friction temperature.

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 8, 1962, 984 – 986

TEXT: For the metallographic investigation of the surface layers on
wearing holes of balls made from ШX6 (ShKh6) steel, these balls were pressed
into methacrylate. The metal around a wearing hole was then gradually
ground away, examined by microscope and its microhardness determined. The
distribution of structural types and the microhardness were recorded gra-
phically and the isotherms of the temperature field associated with the
development of the wearing hole were constructed therefrom. The isotherms
so obtained deviate somewhat from actuality, since the effect of frictional
plastic deformation on the heat set free was not considered. There are 3
figures.

Card 1/2

S/032/62/028/008/009/014
Investigation of the structural changes ... B104/B102

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polycheniyu iskusstvennogo zhidkogo topliva (All-Union Scientific Research Institute for Oil and Gas Refining and Production of Synthetic Liquid Fuel)

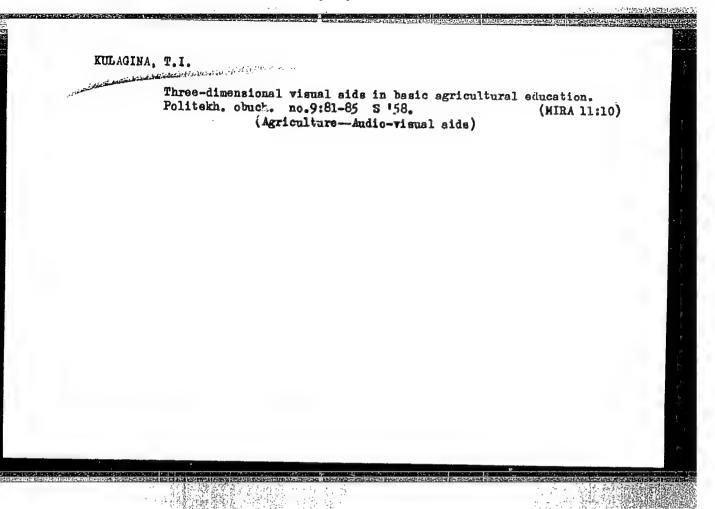Card 2/2

GERTSBERG, V.; KHUDYAKOV, Yu.; GOLIK, V.; ANUFRIYEV, P., inzh.;
    KULAGINA, T., inzh.

A trial check of a suggestion. Sots. trud 8 no.2:115-121
F '63.
                                    (MIRA 16:2)

1. Nachal'nik byuro normirovaniya Ural'skogo zavoda tyazhelogo
mashinostroyeniya (for Gertsberg). 2. Nachal'nik byuro truda i
ekonomiki obrubnogo tsekha Ural'skogo zavoda tyazhelogo mashino-
stroyeniya (for Khudyakov). 3. Starshiy inzhener otdela
organizatsii truda i zarabotnoy platy kombinata Kemerovoshakhtokhimstroy
(for Golik). 4. Otdel organizatsii truda i zarabotnoy platy
kombinata Kemerovoshakhtokhimstroy (for Anufriyev). 5. Otdel
truda i kadrov Upravleniya derevoobrabatyvayushchey i bumazhnoy
promyshlennosti Sverdlovskogo soveta narodnogo khozyaystva
(for Kulagina).
            (Sverdlovsk—Wages—Machinery industry workers)
             (Kemerovo—Wages—Mining engineering)
             (Sverdlovsk—Wages—Furniture industry)

KULAGINA, T.I.

Three-dimensional visual aids in basic agricultural education.
Politekh. obuch. no.9:81-85 S '58.   (MIRA 11:10)
          (Agriculture—Audio-visual aids)

VOLGIN, Vladimir Ivanovich; KULAGINA, T.I., red.; VODOLAGINA, S.D., tekhn.red.

[Brachiopods from upper Carboniferous and lower Permian deposits of southern Fergana] Brakhiopody verkhnekamennougol'nykh i nizhnepermskikh otlozhenii IUzhnoi Fergany. Leningrad, Izd-vo Leningr.univ., 1960. 202 p.   (MIRA 14:1)
     (Fergana--Brachiopoda, Fossil)

SINITSYN, Nikolay Mikhaylovich [deceased]; SINITSYN, V.M., prof., otv. red.; MIKLUKHO-MAKLAY, A.D., red.; OGNEV, V.N., red.; PORSHNYAKOV, G.S., red.; KULAGINA, T.I., red.; VODOLAGINA, S.D., tekhn.red.

[Tectonics of mountains forming the borders of Fergana] Tektonika gornogo obramleniia Fergany. Leningrad, Izd-vo Leningr.univ., 1960. 218 p.   (MIRA 14:1)
              (Fergana—Geology, Structural)

ISACHENKO, Anatoliy Grigor'yevich; KULAGINA, T.I., red.; KISELEVA,
L.I., tekhn. red.

[Physicogeographical mapping] Fiziko-geograficheskoe kartirova-
nie. Leningrad, Izd-vo Leningr. univ. Pt.3. 1961. 267 p.
(MIRA 15:3)
(Physical geography—Maps)

RUKHIN, Lev Borisovich; RUKHINA, Ye.V.; KULAGINA, T.I., red.;
VODOLAGINA, S.D., tekhn.red.

[Cretaceous deposits in the Fergana Valley; stratigraphy and
lithology] Melovye otlozheniia Ferganskoi kotloviny; strati-
grafiia, litologiia. Leningrad, Izd-vo Leningr.univ., 1961.
161 p.   (MIRA 14:4)
     (Fergana--Geology, Stratigraphic)

KRYMGOL'TS, Grigoriy Yakovlevich; KULAGINA, T.I., red.; ZHUKOVA, Ye.G.,
    tekhn. red.

[Ammonites in lower and middle Jurassic sediments of the Northern
Caucasus] Ammonity nizhne- i sredneiurskikh otlozhenii Severnogo
Kavkaza. Leningrad, Izd-vo Leningr. univ., 1961. 164 p.
                                                    (MIRA 14:9)
        (Caucasus, Northern--Ammonoidea)

PAVLOVA, Aleksandra Vasil'yevna; BOGDANOV, K.A., otv. red.; KULAGINA, T.I., red.; ZHUKOVA, Ye.G., tekhn. red.

[Marine charts] Morskie navigatsionnye karty. Leningrad, Izd-vo Leningr. univ., 1961. 179 p.   (MIRA 14:9)
                    (Nautical charts)

VELIKIY, Aleksandr Semenovich; KULAGINA, T.I., red.; VODOLAGINA, S.D.,
        tekhn. red.

[Structure of ore deposits in folded areas] Struktury rudnykh
polei (v skladchatykh oblastiakh. Leningrad, Izd-vo Leningr.
univ., 1961. 274 p.   (MIRA 15:1)
        (Ore deposits)   (Folds (Geology))

ISACHENKO, Anatoliy Grigor'yevich; KULAGINA, T.I., red.; ZHUKOVA,
     Ye.G., tekhn. red.

     [Landform science and physicogeographical regionalization;
     textbook for correspondence school students]Uchenie o land-
     shafte i fiziko-geograficheskoe raionirovanie; uchebnoe po-
     sobie dlia studentov-zaochnikov. Leningrad, Izd-vo Leningr.
     univ., 1962. 54 p.   (MIRA 15:10)
                         (Landforms)

LUKOYANOV, Sergey Mikhaylovich; KULAGINA, T.I., red.; ZHUKOVA, Ye.G.,
tekhn. red.

[Africa; physicogeographical features]Afrika; fiziko-
geograficheskaia kharakteristika. Leningrad, Izd-vo
Leningr. univ., 1962. 146 p.   (MIRA 15:9)
        (Africa—Physical geography)

BALASHOV, Zakhar Grigor'yevich; KULAGINA, T.I., red.; YELIZAROVA,
        N.A., tekhn. red.

        [Ordovician Nautiloidal of the Siberian Platform]Nautilo-
        idei ordovika Sibirskoi platformy. Leningrad, Izd-vo Le-
        ningr. univ., 1962. 204 p.   (MIRA 15:10)
            (Siberian Platform—Nautiloidea, Fossil)

GORN, Natal'ya Konstantinovna; KULAGINA, T.I., red.; YELIZAROVA,
    N.A., tekhn. red.

    [Manual on practical work in historical geology] Rukovod-
    stvo k prakticheskim zaniatiiam po istoricheskoi geologii.
    Leningr. univ., 1962.   257 p.   (MIRA 16:4)
                    (Geology—History)

EWT(m)/EWP(w)/EWF(v)/__2/E_I(t)/ETI/E_E(k)   IJE(c)   JD/HW/EM/GD/JH

SOURCE CODE: UR/0000/66/000/000/0098/0120

ACC NR: AT6028556

AUTHOR: Kulagina, V. A.

ORG: none

TITLE: Experimental investigation of the blade vibration of a plane grid

SOURCE: Lopatochnyye mashiny i struynyye apparaty (Vane machinery and jet apparatus); sbornik statey, no. 1. Moscow, Izd-vo Mashinostroyeniye, 1966, 98-120

TOPIC TAGS: turbine blade, ~~turbine grid~~, blade vibration, aluminum power plant component

ABSTRACT: An experimental investigation was made of blade vibration to determine the effect of geometric and aerodynamic parameters, i.e., grid thickness, blade length, angle of attack, Mach number, etc., on vibration intensity. The tests were conducted in a supersonic wind tunnel with various experimental grids. The tests confirmed the assumption that the main factor determining blade vibration intensity is flow separation. It was found that blade length had a direct effect on vibration intensity under constant flow regimes. The results also showed that an increase in the angle of attack and the velocity of an incoming flow leads to a sharp increase in the amplititude of the blade vibrations. Grid thickness has the same effect on both the variation in total pressure losses and on the intensity of the blade vibrations. From an aerodynamic point of view, a plane grid seems to be optimal in respect to blade vibration.. The vibration safety factor for steel blades is about 1.4 times

Card 1/2   UDC: 629.13.03:621.454:533.6.001.5

ACC NR: AT6028556

greater and for <u>VT1-2 alloy blades</u> about 2.5 times greater than for blades made of aluminum. Orig. art. has: 17 figures and 5 tables.   [TN]

SUB CODE: 21/ SUBM DATE: 06Apr66/ *ATO Press 5065*

Card   2/2

KULAGINA, V.N.; PANCHENKO, S.M. [deceased]; FEDURKIN, V.V.

New pastes for the mechanical polishing of metals. Med.prom. 13
no.9:51-54 S '59.   (MIRA 13:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskogo
instrumentariya i oborudovaniya.
                        (POLISHES)

FEDOROV, S.F., starshiy nauchnyy sotrudnik; SIVASH, K.M., starshiy
nauchnyy sotrudnik; KULAGINA, V.N., inzhener

Splints from a thermoplastic material. Ortop.,travm.i protez.
no.7:56-57 '61.   (MIRA 14:8)

1. Iz Nauchno-issledovatel'skogo instituta eksperimental'noy
khirurgicheskoy apparatury i instrumentov (dir. - M.G. Anan'yev).
              (SPLINTS (SURGERY))   (PLASTICS)

UDEL'NOV, M.G.; KULAGINA, V.P.

Vasomotor reactions in the organs of the abdominal cavity
following quantitative changes in the nervous control.
Fiziol. zh. SSSR Sechenov 49 no.6:760-766 '63
(MIRA 17:1)

1. From the Laboratory of Pathologic Physiology, Institute
of Therapy, Moscow.

RODIONOV, I.M.; KULAGINA, V.P.

Conditions for the appearance of vasodilator effects in an
extremity following stimulation of the sympathetic chain.
Report No.1: Role of the frequency, duration of the stimulus
and of the state of the experimental animal in determining the
character of the effect. Biul. eksp. biol. i med. 53 no.2:13-17
F '62.   (MIRA 15:3)

1. Iz laboratorii patofiziologii (zav. - prof. M.G. Udel'nov)
Instituta terapii (dir. - deystvitel'nyy chlen AMN SSSR A.L.
Myasnikov) AMN SSSR, Moskva. Predstavlena deystvitel'nym
chlenom AMN SSSR A.L. Myasnikovym.
                    (NERVOUS SYSTEM, VASOMOTOR)
                    (NERVOUS SYSTEM, SYMPATHETIC)

KULAGINA, V.P.

Characteristics of efferent impulsation in the postganglionic nerve pathways of the splanchnic nerve during vasoconstrictive and vasodilative reactions in the organs of the abdominal cavity. Biul. eksp. biol. i med. 57 no.3:6-10 Mr '64.

(MIRA 17:11)

1. Laboratoriya patofiziologii (zav. - prof. M.G. Udel'nov) Instituta terapii (dir. - deystvitel'nyy chlen AMN SSSR prof. A.L. Myasnikov) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR A.L. Myasnikovym.

KULAGINA, V.P.

Vasomotor effects of the viscera depending on quantitative
changes in the nerve impulsation of the postganglionic path-
ways. Biul. eksp. biol. i med. 60 no.11:10-14 N '65.
(MIRA 19:1)

1. Laboratoriya patofiziologii (zav. - prof. M.G. Udel'nov)
Instituta terapii (direktor - deystvitel'nyy chlen AMN SSSR
prof. A.L. Myasnikov) AMN SSSR, Moskva. Submitted June 30, 1964.

KILYIN, Ye. A.

355 5 Operatsii pri vyvikhe klyuchevalka s povrezhdeniyem kaverty i s sklovikago telo. Sbornik k pyatidesyatiletnye nauch., ped., vrach... I obshche... A. D...l'... N. Kh. orlova. Gor'ki, 1949, S. 123-31

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, 1949

AUTHOR: Kulagina, Z.A., Mining Engineer   127-58-7-2/20

TITLE: The Iron Ore Base of the Magnitogorsk Metallurgical Combine
            (Zhelezorudnaya baza Magnitogorskogo metallurgicheskogo kom-
            binata)

PERIODICAL: Gornyy zhurnal, 1958, Nr 7, pp 10-13 (USSR)

ABSTRACT: In connection with the projected increase in the production of
            smelted metal, the Magnitogorskiy metallurgicheskiy kombinat
            (Magnitogorsk Metallurgical Combine) will need about 17 million
            tons of concentrated iron ore yearly. As the output of the
            Magnitogorsk deposits will decrease gradually from 1961 on, de-
            liveries to the combine will be supplemented by the magnetite
            ore deposits of the Kustanay oblast', situated 345 km from
            Magnitogorsk. This will increase the cost of the iron, but it
            will still be the cheapest cast iron in the country. Further
            development of the deposits of the Kustanay region (Table 1)
            will necessitate the construction of various concentrating
            plants in Magnitogorsk and in the operating Sokolovo-Sarbay
            combine. The author finds that though the Magnitogorsk deposits
            will be exhausted in a few years, a well-planned development of
            the Kustanay deposits wil assure the working potential of the
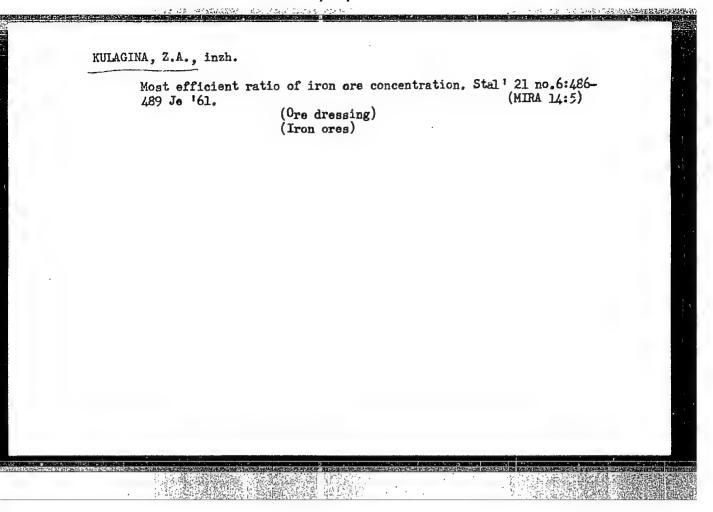Card 1/2   Magnitogorsk combine for years to come.

The Iron Ore Base of the Magnitogorsk Metallurgical Combine   127-58-7-2/20

There are 5 tables.

ASSOCIATION: Gipromez

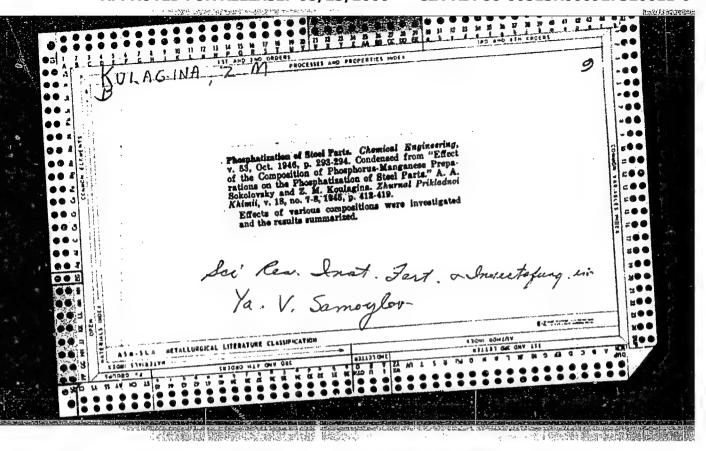Card 2/2   1. Industry-USSR   2. Magnetite-Production

KULAGINA, Z.A., inzh.

Most efficient ratio of iron ore concentration. Stal' 21 no.6:486-489 Je '61.

(MIRA 14:5)

(Ore dressing)
(Iron ores)

KULAGINA, Z M

PROCESSES AND PROPERTIES INDEX

9

Phosphatization of Steel Parts. *Chemical Engineering*, v. 53, Oct. 1946, p. 293-294. Condensed from "Effect of the Composition of Phosphorus-Manganese Preparations on the Phosphatization of Steel Parts." A. A. Sokolovsky and Z. M. Koulagina. *Zhurnal Prikladnoi Khimii*, v. 18, no. 7-8, 1945, p. 412-419.

Effects of various compositions were investigated and the results summarized.

Sci' Res. Inst. Fert. & Insectofung. in
Ya. V. Samoylov—

METALLURGICAL LITERATURE CLASSIFICATION

GLIZMANENKO, D.L., nauchnyy red.; KULAGINA, Z.N., red.; KOLESNIKOVA, A.P.,
          tekhn.red.

[Practices of leading workers in oxygen production] Opyt peredo-
vokov kislorodnogo proizvodstva. Moskva, TSentr. biuro tekhn.
informatsii. No.2. 1957. 32 p.   (MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kislorodnogo
mashinostroyeniya.
                              (Oxygen)

VOL'FKOVICH, S.I.; SOKOLOVA, T.I.; KULAGINA-SMIRNOVA, Z.G.; KNYAZEVA, K.P.

Carbonization process for production of cryolite from fluorosili-
cate gases. Zhur. prikl.khim. 31 no.7:969-976 Jl '58. (MIRA 11:9)
           (Cryolite)   (Fluorosilicate)

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 47232

Author   : Kulaga, G.V.
Inst   : Minsk Medical Institute
Title   : Clinical Observations in the Treatment of Rheumatism with
           Adrenocorticotropic Hormone (ACTH)

Orig Pub : Sb. nauchn. rabot. Minskiy med. in-t, 1957, 10, 213-222

Abstract : Thirty-three patients affected with acute rheumatism (most
           of them in the stage of an acute attack of the joints) were
           treated with ACTH. For comparison, a second group of
           patients, analogous as to number, age and severity of dis-
           ease, was treated with sodium salicylate (6-8.g. per 24 hrs.).
           ACTH was administered intramuscularly, usually 40 units per
           24 hrs., divided into four equal doses. During the course
           of treatment, the patients were receiving, on the average,
           650-700 units of ACTH. It was established that the treat-
           ment with ACTH was relieving painfulness more rapidly than

Card   : 1/2

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 47232

           the one with salicylates; objective pathological symptoms
           in the area of the joints and temperature, as well as in-
           dices provided by E.S.R., were also becoming normal more
           rapidly; the increase of capillary permeation (Nesterov's
           test) and the changes of capillary circulation (according
           to capillaroscopical data) ceased, and appetite as well as
           general condition and frame of mind improved. The treat-
           ment with ACTH was especially effective when started early,
           and in particular in patients experiencing their first
           rheumatic attack. In 3 patients, the treatment with ACTH
           was without effect and in 7 only partial improvement was
           achieved. The positive effect from the treatment with ACTH
           follows the first 8-10 days of treatment; in the absence
           of an improvement during this period, further application
           of ACTH is inexpedient. Side effects such as slight in-
           crease of blood pressure, itching rash, etc., were noted
           in 5 patients out of 33 treated with ACTH.--G.I. Arsen'yev

Card   : 2/2

KULAGO, G. V.: Master Med Sci (diss) -- "The comparative evaluation of the
therapeutic effectiveness of adrenocorticotropic hormone (ACTH) and the
salicylates in rheumatism". Minsk, 1959. 16 pp (Minsk State Med Inst),
150 copies (KL, No 12, 1959, 132)

ZAIMANENOK, V.S. ; KULAGO, G.V., kand.med.nauk

Pulseless disease. Zdrav. Bel. 9 no.3:78-80 Mr'63 (MIRA 16:12)

1. Iz kliniki propedevtiki vnutrennikh bolezney (zav. -prof. N.I.Shvarts) Grodnenskogo meditsinskogo instituta i 1-y klinicheskoy bol'nitsy imeni Z.P.Solov'yeva g.Grodno (glavnyy vrach - zasluzhennyy vrach BSSR V.Yu. Mironchik).

KUIAGO, O.I.

Testosterone propionate therapy of preclimactic and climactic disorders in women. Akush. i gin. 34 no.6:50-52 N-D '58.   (MIRA 12:1)

1. Iz rodil'nogo doma (glavnyy vrach Z.A. Arkhipova), Sevastopol'.
        (CLIMACTERIC, FEMALE, ther.
                ther., testosterone propionate (Rus))
        (TESTOSTERONE, ther. use
                testosterone propionate in female climacteric compl. (Rus))

BUD'KO, I.A.; KULAGOV, E.A.

    Natural cubic chalcopyrite. Dokl. AN SSSR 152 no.2:408-
    410 S '63.   (MIRA 16:11)

    1. Predstavleno akademikom D.S. Korzhinskim.

KULAK, A. I.

"Determination of the quality of micro admixtures of nickel, cobalt, copper, tellurium, and antimony."

report presented at The Use of Radioactive Isotopes in Analytical Chemistry, Conference in Moscow, 2-4 Dec 1957
Vestnik Ak Nauk SSSR, 1958, No. 2, (author Rodin, S. S.)

. Determination of gold and of the platinum metals in re
fined silver and cathode nickel by the radioactive method "?

±5- 20%

J. R_ _ar Leach -

Kulak, A.I

AUTHOR: Kulak, A. I.   75-6-13/23

TITLE: Quantitative Determination of Micro-Contaminations in Antimony by the
           Analysis of Neutron-Activation (Kolichestvennoye opredeleniye mikro=
           primesey v sur'me metodom neytronnoy aktivatsii).

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1957, Vol. 12, Nr 6, pp. 727-730 (USSR).

ABSTRACT: The quantitative determination of micro-contaminations like nickel,
           copper, tellurium and arsenic in antimony by the method of radioacti=
           vation is described in the present report. Copper can be determined
           in a quantity of lo^{-10}g, cobalt in a quantity of lo^{-8}g and arsenic in a
           quantity from lo^{-6} to lo^{-10}g. The methods of both separation and puri=
           fication of nickel, copper, cobalt and arsenic are fully described.
           The sensitiveness of the separation and purification methods was inves=
           tigated by means of radioactive indicators. The accuracy of the me=
           thod amounts to from lo to 2o%.
           There are 1 table, and 14 references, 2 of which are Slavic.

ASSOCIATION: Chemical-Technological Institute imeni D. I. Mendeleyev-Moscow (Mos=
            kovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva).

Card 1/2

Quantitative Determination of Micro-Contaminations in Antimony   75-6-10/23
by the Analysis of Neutron-Activation.
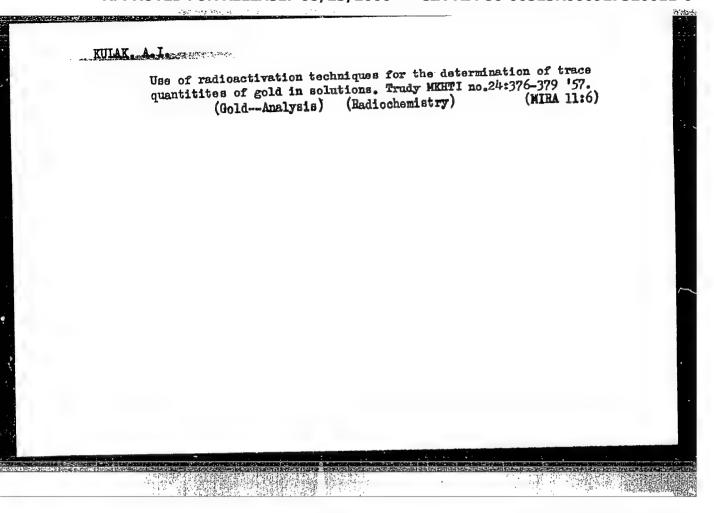
SUBMITTED: December 18, 1956.

AVAILABLE: Library of Congress.

        1. Antimony-Micro contamination-Determination   2. Neutron
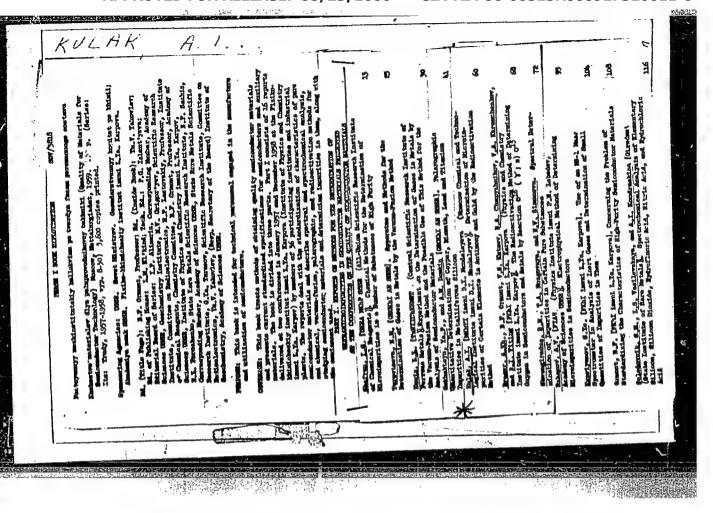   activation analysis   3. Radioactive indicators-Application

Card 2/2

KULAK, A.I.

Use of radioactivation techniques for the determination of trace
quantitites of gold in solutions. Trudy MKHTI no.24:376-379 '57.
(Gold--Analysis)   (Radiochemistry)   (MIRA 11:6)

KULAK, A. I. Cand Chem Sci -- (diss) "The radioactivation method in the determination of microscopic amounts of admixtures in certain technical objects." Mos, 1958. 13 pp (Min of Higher Education USSR. Mos Order of Lenin Chem-Technological Inst im D. I. Mendeleyev), 120 copies (KL, 11-58, 113)

-20-

KULAK, G.N.

**1026. A SELF-RETAINING RETRACTOR FOR OPERATIONS ON THE MAXIL-
LARY SINUSES AND NASAL SEPTUM** (Russian text) - K u l a k G . N . Nauch.
Rabot.I Leningr. Voen.-Morsk. Gosp. 1957, (174-176)

A self-retaining retractor allowing one to dispense with assistants is described.
Its use is recommended in otolaryngology, stomatology and maxillo-facial surgery.

(S)

KULAK, I. A.

Dynamometer

Universal dynamometer. Teor. i prak. fizkul., 15, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March, 1952 ~~1953;~~ Uncl.

KURAN, L. A.

"Cortical Regulation of Fatigue in Muscular Work and the Restoration of the Capacity to Work by Rest." Cand Biol Sci, Belorussian State U imeni V. I. Lenin], 23 Feb 54.

Dissertation (Sovetskaya Belorussiya Minsk, 14 Feb 54)

SO: SUM 16, 17 Aug 1954

KUIAK, I.A.

Complex motor trace reflexes in man. Trudy Inst. fiziol. AN BSSR 2:48-60
'58.   (MIRA 12:1)

1, Laboratoriya vysshey nervnoy deyatel'nosti Instituta fiziologii
AN BSSR.
          (CONDITIONED RESPONSE)

KULAK, I.A.

Dynamics of cortical processes during bimanual work in man. Trudy Inst.
fiziol. AN BSSR 2:61-70 '58.   (MIRA 12:1)

1. Laboratoriya vysshey nervnoy deyatel'nosti Instituta fiziologii
AN BSSR.
          (CEREBRAL CORTEX) (MUSCLES)

KULAK, I.A.

Dynamics of the formation of a system of temporary connections in schoolchildren of different ages. Trudy Inst.fiziol. AN BSSR 3:13-24 '59. (MIRA 13:7)

1. Laboratoriya vysshey nervnoy deyatel'nosti Instituta fiziologii AN BSSR.

(CONDITIONED RESPONSE)

KULAK, I.A.

Mobility and resistance of newly elaborated temporary connections
in shcoolchildren of different ages. Trudy Inst.fiziol.AN BSSR
3:25-37 '59.   (MIRA 13:7)

1. Laboratoriya vysshey nervnoy deyatel'nosti Instituta fizio-
logii AN BSSR.

(CONDITIONED RESPONSE)

KULAK, I.A.

Role of separate components in signal complex in the formation of a system of temporary connections in pupils of the 4th and 7th grades. Trudy Inst.fiziol.AN BSSR 3:38-48 '59.

(MIRA 13:7)

1. Laboratoriya vysshey nervnoy deyatel'nosti Instituta fiziologii AN BSSR.

(CONDITIONED RESPONSE)

KULAK, I.A.

Effect of the training of nerve processes on the dynamics of formation of a system of temporary connections in children 10 and 11 years old. Dokl. AN BSSR 3 no.4:177-180 Ap '59.
                                              (MIRA 12:10)

1.Predstavleno akademikom AN BSSR V.A. Leonovym.
          (CONDITIONED RESPONSE)

KULAK, I.A.; AKIMOV, V.G.

New method for studying the higher nervous activity of dogs
in the case of motor reinforcement. Dokl.AN BSSR 4 no. 5:222-
225 My '60.   (MIRA 13:10)

1. Institut fiziologii AN BSSR. Predstavleno akademikom
AN BSSR V.A.Leonovym.
                    (CONDITIONED RESPONSE)

KULAK, Iosif Antonovich; KESAREVA, Ye.P., prof., red.; ZAYTSEVA, T.,
     red.; SIDERKO, N., tekhn. red.

     [Formation of complex systems of time relations in man] Formiro-
     vanie slozhnykh sistem vremennykh sviazei u cheloveka. Minsk,
     Izd-vo Akad.nauk BSSR, 1962. 229 p.   (MIRA 15:7)
        (NERVOUS SYSTEM)   (REACTION TIME)

KULAK, I.A.; SHAFRANSKIY, L.V. [Shafranski, L.V.]

Dynamics of the temperature change in the skin during the forma-
tion of complex time relations in man. Vestsi AN BSSR Ser. biial.
nav. no.3:98-102 '64   (MIRA 18:1)

TOMASIK, Zdzislaw, prof. dr; WRZYSZCZ, Jozef, dr inz.; KULAK, Stefan, mgr
    inz.

Influence of pressure on the reformation of gasoline from
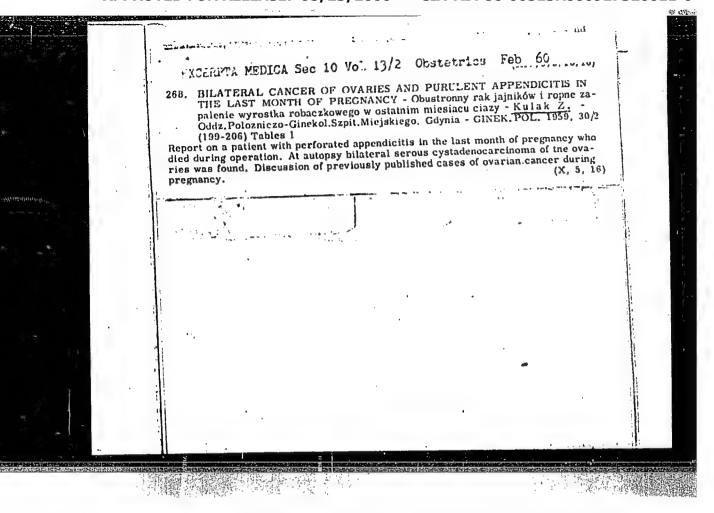Romashkino petroleum at various boilings points. Nafta 20
no.11:300-304 N '64.

1. Institute of Organic Synthesis, Polish Academy of Sciences,
Wroclaw.

Kulak, V.S.

KULAK, V.S. (Alma-Ata)

The turkestan-Siberian railroad--firstling of the five year
plans. Zhel.dor.transp. 39 no.10:76-80 O '57.   (MIRA 10:10)

1.Nachal'nik Turkestano-Sibirskoy zheleznoy dorogi.
            (Siberia--Railroads)

EXCERPTA MEDICA Sec 10 Vol. 13/2 Obstetrics Feb 60

268. BILATERAL CANCER OF OVARIES AND PURULENT APPENDICITIS IN
THE LAST MONTH OF PREGNANCY - Obustronny rak jajników i ropne za-
palenie wyrostka robaczkowego w ostatnim miesiacu ciazy - Kulak Z. -
Oddz. Polozniczo-Ginekol.Szpit.Miejskiego. Gdynia - GINEK. POL. 1959, 30/2
(199-206) Tables 1

Report on a patient with perforated appendicitis in the last month of pregnancy who
died during operation. At autopsy bilateral serous cystadenocarcinoma of tne ova-
ries was found. Discussion of previously published cases of ovarian.cancer during
pregnancy.   (X, 5, 16)

KULAKAUSKAS, A.K., Cand Tech Sci -- (diss) "Study of a
synchronous self-exciting generator." Kaunas, 1958, 12
pp with diagrams (Min of Higher Education USSR. Kaunas
Polytechnic Inst) 130 copies (KL, 23-58, 106)

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BAYBARODSKIKH, N.I.; KULAKHMETOV, N.Kh.; POPLAVSKIY, N.N.

Geological development and facies of the eastern margin of the West
Siberian Plain in the Jurassic and Lower Cretaceous.   Trudy SNIIGGIMS
no.26:40-47 '62.   (MIRA 16:3)
                (West Siberian Plain—Geology)

BAYBARODSKIKH, N.I.; KULAKHMETOV, N.Kh.; POPLAVSKIY, N.N.

Stratigraphy of Jurassic sediments in the Yenisey Valley portion of
the West Siberian Plain. Geol. i geofiz. no.2:44-54 '63.
(MIRA 16:5)

1. Krasnoyarskoye geologicheskoye upravleniye.
(Yenisey Valley—Geology, Stratigraphic)

OTLIVNOY, I.F., inzh.; KULAKHMETOV, Sh.Kh., inzh.; TURCHIN, N.Ya., inzh

Constructing a reinforced concrete hyperbolic cooling tower.
Stroi.prom. 27 no.12:16-19 D '49.   (MIRA 13:2)
        (Precast concrete construction)
            (Cooling towers)

Revtinatinaciev, SN NN.

97-57-9-9/17

AUTHOR: Alekseyev, S. N. (Candidate of Technical Sciences).

TITLE: Damage to Columns of/Reinforced Concrete Water-Cooling
            Tower Built From Concrete Liable to Deterioration by
            Frost. (Razrusheniye kolonn zhelezobetonnoy gradirni iz
            nemorozostoykogo betona).

PERIODICAL: Beton i Zhelezobeton, 1957, Nr.9. pp.368-369. (USSR).

ABSTRACT: The reinforced concrete hyperbolic-shaped water-cooling
            tower of the TETs, No.16 of the Mosenergo, discussed
            in an article entitled "Construction of a Reinforced
            Concrete Hyperbolic Water-Cooling Tower" by I. F. Otlivnoy,
            Sh.Kh. Kulakhmetov and N. Ya. Turchin (Ref.1), is carried
            on 72 inclined pre-cast reinforced concrete columns,
            octagonal in section, and 340 mm high. The columns are
            reinforced with 9 steel bars of 24 mm diameter, and
            spiral reinforcement of 8 mm diameter at 100 mm intervals.
            Concrete Mark 140 should have been used, but the columns
            were made from concrete Mark 200, and no frost-reistance
            tests were carried out. The cement used was of the
            pozzolana Portland cement type Mark 400 having slump
            test values of 4-6 cm, with a water/cement ratio of 0.59.
            $1 m^3$ of this concrete contains 300 kg cement, 601.8 kg
            of sand and 1280 kg of aggregate. Test cubes after 7
Card 1/3   days showed strength of 113.4 kg/cm^2, and after 28 days

97-57-9-9/17

Damage to Columns of Reinforced Concrete Water-Cooling Tower Built from Concrete Liable to Deterioration by Frost.

198.6 kg/cm^2. The sand and aggregate were from the Petrovsk pit. The sand was not sieved and the aggregate was not washed. The concrete was mixed in mixers, put into wooden form-work, and consolidated by 1-21 type vibrator. The concrete was hardened by steam-curing at a temperature of 70-80°C for 18-24 hours. The final strength of the concrete was 80-190 kg/cm^2. The water-cooling tower was put into use in 1955. In the spring of 1957, considerable deterioration of the columns occurred, especially where the cooled water flowed. The columns developed cracks on the surface, and the concrete broke off in slabs, so that the spiral reinforcement was in many cases exposed (see Fig.1). The lower part of the columns were covered by deposits of calcium carbonate, the result of alkalization due to water (see Fig.2). Some cracks were 5-7 cm deep, exposing not only the spiral reinforcement, but also the main reinforcement. This is caused by freezing of porous concrete saturated with water. The low frost-resistance property of the concrete is due to insufficient density caused by the use of pozzolana Portland cement and the high water content. The damaged parts

Card 2/3.

97-57-9-9/17

Damage to Columns of/Reinforced Concrete Water-Cooling Tower Built
From Concrete Liable to Deterioration by Frost.

of the column were removed, and the columns were
cased in steel mesh, and a fresh layer of concrete
applied. Experience shows that for this type of con-
struction, high density concrete should be used to
prevent destruction by ice formation in the pores.

AVAILABLE: Library of Congress.

1. Water tower-Construction   2. Concrete-Reinforced   3. Concrete-
   Deterioration   4. Concrete-Weather factors

Card 3/3

KULAKHMET'YEV, R.M.

Anticorrosive protection of equipment, pipe systems, and structures.
Tekst.prom. 22 no.6:80-82 Je '62.   (MIRA 16:5)

1. Glavnyy inzh. proyekta Gosudarstvennogo proyektnogo instituta
No.1 pri Vserossiyakom sovete narodnogo khozyaystva.
                    (Corrosion and anticorrosives)
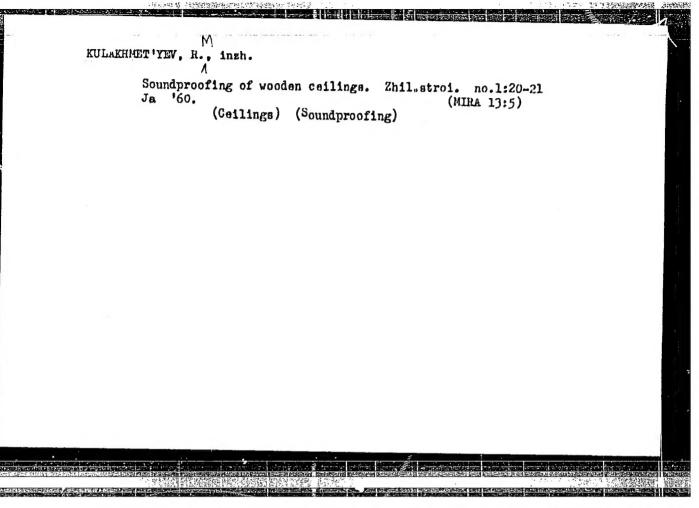   (Textile industry--Equipment and supplies)

KULAKHMET'YEV, R.M.

Maintenance of the floor coverings in the industrial buildings of
the textile industry. Tekst.prom. 23 no.5:76-80 My '63.
(MIRA 16:5)

1. Glavnyy inzh. Gosudarstvennogo proyektnogo instituta No.1 pri
Vserossiyskom sovete narodnogo khozyaystva.
(Textile factories--Design and construction) (Floor coverings)
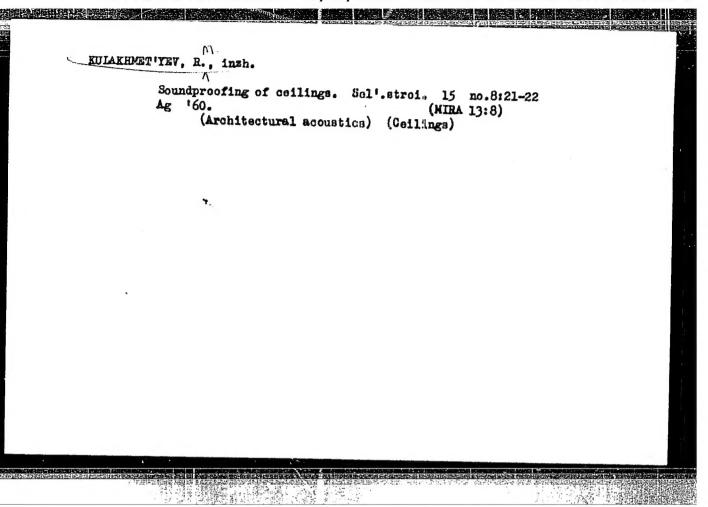
KUIAKHMET'YEV, R.M., inzh.

Soundproof properties of lightweight wooden ceilings. Biul. stroi.
tekh. 15 no.5:11-13 My '58.   (MIRA 11:6)

1. Gosudarstvennyy proyektnyy institut – 1 Gosplana RSFSR.
      (Acoustical materials)   (Ceilings)

KULAKHMET'YEV, R., inzh.

Soundproofing of wooden ceilings. Zhil.stroi. no.1:20-21
Ja '60. (MIRA 13:5)
(Ceilings) (Soundproofing)

KULAKHMET'YEV, R., inzh.

Soundproofing of ceilings. Sel'.stroi, 15 no.8:21-22
Ag '60.   (MIRA 13:8)
        (Architectural acoustics) (Ceilings)

KULAKHMET'YEV, R.M., inzh.; BABINSKIY, A.Ya.; SELIVANOV, P.Ya.; ZAMAKHOVSKIY, L.I., kand.tekhn.nauk

Consultation. Tekst.prom. 21 no.2:86-89 Ja '61. (MIRA 14:3)

1. Gosudarstvennyy proyektnyy institut No. 1 (for Kulakhmet'yev).
(Textile machinery)